ABSTRACT OF THE DISCLOSURE

A transmission weight vector computing unit computes transmission weight vectors. A transmission weight vector correcting unit obtains a corrected transmission weight vector W'(t). A predicted receiving power computing unit computes a predicted receiving power value Y(t). If a difference between the predicted receiving power value Y(t) and a predicted receiving power value in the past Y(t-T) is less than a threshold value, an update unit selects the corrected transmission weight vector W'(t). If, on the other hand, the difference is greater or equal to the threshold value, the update unit selects a corrected weight vector in the past W'(t-xT). If the modulation method is QPSK, a setting unit selects the transmission weight vector W(t). If the modulation method is 16QAM, the setting unit selects the corrected transmission weight vector W'(t) or W'(t-xT) and outputs it as a final transmission weight vector signal.

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